Utilities, Czech Republic

Photon Energy

Buy

Maintained

Price: CZK 67 Price target: CZK 105 (From: CZK 90)

Expanding beyond physical assets

We reiterate our BUY on Photon Energy and increase our 12M price target (PT) to CZK 105/share (from CZK 90/share), yielding 56% upside. While we expect power prices to continue falling in Europe and we have also become more conservative on the company's capacity rollout, mainly in Poland, the hike in our PT is driven by Photon's recent acquisition of Lerta, a Polish power-tech company. Moreover, we assess the impact of recent regulatory changes in the region (caps and windfall taxes) as in line or even better than we expected previously. With doubledigit EBITDA growth in the coming years, a healthy balance sheet and exposure to all of the segments of PV downstream, Photon remains one of our utilities top picks. Photon is trading at our 2022-24E EV/EBITDAs of 7.4-9.7x, 37% below its peer group, at attractive multiples, partly on the very low liquidity of its shares.

Lerta acquisition is a good fit. In December, Photon increased its stake in Lerta to 100%. Lerta, whose two co-founders are joining Photon, represents a strategically sound investment, with Photon increasing its knowhow and options in grid balancing, demand-side response/capacity and other fields. Lerta operates a virtual power plant and holds six energy trading licences in the region, while being the third-largest real-time asset aggregator in Poland.

Romania to drive generation growth. In Romania, Photon has already spent capex on its new 32MW merchant portfolio, which should contribute strongly to this year's EBITDA growth, offsetting the falling power prices, on our estimates. In Poland, which has imposed a very strict tax regime on generators, we become more conservative on the capacity rollout, but we still see new additions in Hungary this year. We expect Photon to build only merchant power plants from now on.

Windfall taxes and caps impact limited. With power prices falling below the EU's EUR 180/MWh cap already, tariffs not being taxed and no windfall taxation expected on net profit, Photon is one of the winners of the volatile market. Effectively, Photon faces only a modest negative impact in the Czech Republic and Hungary, and no impact in Slovakia and Romania. We are not aware of any new tax scheme being prepared in the region.

Model update. Our power price estimates remain relatively unchanged vs. our July update. We now see stronger 2022E EBITDA, in line with Photon's guidance and supported by last year's power price rally. Our capacity rollout forecasts have been cut – by 60MW in 2023E and 15MW in 2024E – lowering our generation EBITDA by 19% and 22%, respectively, over the next two years. However, with more clarity likely to be provided in next month's guidance release, we may update our conservative assumptions. On the flipside, our 2023-24E revenue expectations have increased by 35%, on average, driven by Lerta (with limited margins for now) and stronger technology sales.

Valuation and risks. Our 70:30 weighted DCF and peers valuation generate a 12M PT of CZK 105/share, or 56% upside. We add Lerta to our model, which brings additional upside, more than offsetting our higher WACC. The main risks for our forecasts are: CEE power price levels; government interventions; execution risks; and the supply chain issue in the PV industry, among others. Upside risk comes from a higher-than-modelled Romania load factor, or stronger revenues and margins than reflected in our model for Lerta.

Year	Sales	EBITDA	Net profit	EPS	EPS	P/E	P/CE	EV/	DPS	Dividend
	(EUR m)	(EUR m)	(EUR m)	(EUR)	growth	(x)	(x)	EBITDA	(EUR)	yield (%)
2019	30.4	7.9	-0.7	-0.01	n.m.	n.m.	14.4	19.6	0.00	0.0%
2020	28.6	8.4	-8.7	-0.15	n.m.	n.m.	30.1	31.4	0.00	0.0%
2021	36.8	9.6	-6.4	-0.11	n.m.	n.m.	14.0	18.4	0.00	0.0%
2022E	85.9	25.4	6.3	0.10	n.m.	24.2	5.9	9.7	0.00	0.0%
2023E	113.2	30.8	12.5	0.20	97%	12.3	5.4	9.3	0.00	0.0%
2024E	136.1	43.5	15.8	0.26	26%	9.7	3.3	7.4	0.00	0.0%

Expected events

4Q22 results	10 February (TBC)
Key data	
Market Cap	EUR 152m
Free float	28%
3M ADTV	EUR 0.1m
Shares outstanding	60m
Major Shareholder I	Mngt/cofounders (71%)
Bloomberg Code	PEN CP
PX Index	1,285

Price performance

52-w range	CZK 36-89
52-w performance	+68%
Relative performance	+79%

Photon 12M share price performance



EQUITY RESEARCH

Analysts: Ondrej Slama; Bram Buring, CFA E-mail: ondrej.slama@wood.cz, bram.buring@wood.cz

Contents

Company snapshot – BUY, PT CZK 105	.3
Lerta acquisition – strategically sound expansion	.4
Valuation: BUY, PT CZK 105, 55% upside	.5
Risks	.7
Financials	.8
Important disclosures	10

Closing Prices as of 13 January 2023

© 2023 by WOOD & Company Financial Services, a.s.

All rights reserved. No part of this report may be reproduced or transmitted in any form or by any means electronic or mechanical without written permission from WOOD & Company Financial Services, a.s. This report may not be lent, resold, hired out or otherwise disposed of by way of trade in any form of binding or cover other than that in which it is published without written permission from WOOD & Company Financial Services, a.s.

Requests for permission to make copies of any part of this report should be mailed to:

WOOD & Company Financial Services a.s. Palladium, Namesti Republiky 1079/1a, 110 00 Prague 1 – Czech Republic tel.: +420 222 096 111 fax: +420 222 096 222 http://:www.wood.cz

Company snapshot – BUY, PT CZK 105

Photon Energy

BUY		
Bloomberg ticker	PEN CP	100
Closing price (CZK)	67	90 -
Price Target (CZK)	105	80 - / h
Upside to PT	56%	⁷⁰ μ ¹) Μ. Λ.
Shares outstanding (m)	60	60
MCAP (EUR m)	152	50 - Jun Mark Mark
Free float	28%	40 months and
ADTV (EUR m)	0.1	30
52 Week Range (CZK)	36-89	Jan Cash want was had not jul and say can wait
52 Week Performance	68%	PEN CP PX (rebased)
52W Relative Performance	79%	



Photon Energy Group, founded in 2008 and based in the Netherlands, is a vertically-integrated utility in the downstream segment of the photovoltaic industry. Its business model covers the whole life cycle of a power plant, from development through to electricity generation, to decommissioning. Currently, Photon operates more than 90MW of its own PV capacity, in CEE and Australia, and maintains around 300MW of solar plants, mainly in Europe. Photon is also active in the water treatment business, awaiting the results of its R&D currently, and it took full control of Lerta, a Polish power-tech company, recently. Moreover, Photon holds an equity state in an Australian developer of solar battery storage and generation – RayGen. The shareholder structure is composed of two main players, namely: Solar Puture (Michael Gartner, CTO) and Solar Power to the People (Georg Hotar, CEO), which control 70% of the company's shares. Roughly 28% of shares will be in free float after the Lerta acquisition has been finalised.

2019	2020											
	2020	2021	2022E	2023E	2024E	VALUATION RATIOS	2019	2020	2021	2022E	2023E	2024
-0.01	-0.15	-0.11	0.10	0.20	0.26	P/E	n.m.	n.m.	n.m.	24.2x	12.3x	9.7x
0.10	0.10	0.10	0.43	0.47	0.76	P/CF	14.4x	30.1x	14.0x	5.9x	5.4x	3.3x
0.63	0.67	0.86	0.96	1.15	1.41	P/B	2.3x	4.5x	1.7x	2.6x	2.2x	1.8x
0.00	0.00	0.00	0.00	0.00	0.00							
						EV/EBITDA	19.6x	31.4x	18.4x	9.7x	9.3x	7.4x
2019	2020	2021	2022E	2023E	2024E	EV/Sales	5.1x	9.3x	4.8x	2.9x	2.5x	2.4x
2.9x	2.2x	0.8x	1.4x	2.2x	4.5x	EV/EBIT	135.8x	2,055.7x	n.m.	16.6x	15.8x	11.6x
0.19x	0.14x	0.07x	0.11x	0.19x	0.35x							
0.3x	0.5x	1.3x	2.1x	1.1x	0.7x							
26.2%	29.5%	26.1%	29.6%	27.2%	32.0%	Cash flow from ops, EUR m	6.2	6.0	6.2	25.8	28.8	46.6
3.8%	0.5%	-3.0%	17.4%	16.1%	20.5%	EV, CZK m	4,063	7,009	4,690	6,607	7,649	8,621
-2.4%	-30.4%	-17.5%	7.3%	11.1%	11.6%							
n.a.	-22.3%	-14.0%	11.4%	19.6%	20.2%							
						FCF, EUR m	-8	-14	-8	1	5	-19
1.8x	2.1x	1.7x	1.7x	1.9x	2.0x	FCF yield	-0.4%	-0.3%	-0.3%	0.0%	0.1%	-0.5%
8.5x	10.0x	9.3x	3.8x	4.3x	3.9x	Dividend yield	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	0.63 0.00 2019 2.9x 0.19x 0.3x 26.2% 3.8% -2.4% n.a. 1.8x	0.10 0.10 0.63 0.67 0.00 0.00 2019 2020 2.9x 2.2x 0.19x 0.14x 0.3x 0.5x 26.2% 29.5% 3.8% 0.5% n.a22.3% 1.8x 2.1x	0.10 0.10 0.10 0.63 0.67 0.86 0.00 0.00 0.00 2019 2020 2021 2.9x 2.2x 0.8x 0.18x 0.14x 0.07x 0.3x 0.5x 1.3x 26.2% 29.5% 26.1% 3.8% 0.5% -3.0% -2.4% -30.4% -17.5% n.a. -22.3% -14.0% 1.8x 2.1x 1.7x	0.10 0.10 0.43 0.63 0.67 0.86 0.96 0.00 0.00 0.00 0.00 2019 2020 2021 2022 2.9x 2.2x 0.8x 1.4x 0.18x 0.14x 0.07x 0.11x 0.3x 0.5x 1.3x 2.1x 2.2% 29.5% 26.1% 29.6% 3.8% 0.5% -3.0% 17.4% -24% 30.4% -17.5% 7.3% n.a. -22.3% -14.0% 11.4% 1.8x 2.1x 1.7x 1.7x		0.10 0.10 0.10 0.43 0.47 0.76 0.63 0.67 0.86 0.96 1.15 1.41 0.00 0.00 0.00 0.00 0.00 0.00 2019 2020 2021 2022E 2023E 2024E 2.9x 2.2x 0.8x 1.4x 2.2x 4.5x 0.19x 0.14x 0.07x 0.11x 0.19x 0.35x 0.3x 0.5x 1.3x 2.1x 1.1x 0.7x 26.2% 29.5% 26.1% 29.6% 27.2% 32.0% 3.8% 0.5% -3.0% 17.4% 16.1% 20.5% 2.4% -30.4% -17.5% 7.3% 11.1% 11.6% n.a. -22.3% -14.0% 11.4% 19.6% 20.2% 1.8x 2.1x 1.7x 1.7x 1.9x 2.0x	0.10 0.10 0.43 0.47 0.76 P/CF 0.63 0.67 0.86 0.96 1.15 1.41 P/B 0.00 0.00 0.00 0.00 0.00 EV/EBITDA 2019 2020 2021 2022E 2023E 2024E EV/EBITDA 2.9x 2.2x 0.8x 1.4x 0.19x 0.35x EV/EBIT 0.3x 0.5x 1.3x 2.1x 1.1x 0.19x 0.35x 2.2% 29.5% 26.1% 29.6% 27.2% 32.0% Cash flow from ops, EUR m 3.8% 0.5% -3.0% 17.4% 16.1% 20.5% EV, CZK m -2.4% 30.4% 17.5% 7.3% 11.1% 11.6% EV, CZK m 1.8x 2.1x 1.7x 1.9x 2.0x FCF, EUR m	0.10 0.10 0.10 0.43 0.47 0.76 P/CF 14.4x 0.63 0.67 0.86 0.96 1.15 1.41 P/B 2.3x 0.00 0.00 0.00 0.00 0.00 EV/EBITDA 19.6x 2019 2020 2021 2022E 2023E EV/EBITDA 19.6x 0.3x 0.5x 1.4x 0.7x 0.11x 0.19x 0.35x EV/EBIT 135.8x 0.3x 0.5x 1.3x 2.1x 1.1x 0.7y 6.25% 32.0% Cash flow from ops, EUR m 6.2 2.8% 2.9.5% 26.1% 29.6% 27.2% 32.0% Cash flow from ops, EUR m 4.063 .2.4% 30.4% 17.5% 7.3% 11.1% 11.6% 20.2% FCF, EUR m 48 1.8x 2.1x 1.7x 1.9x 2.0x FCF jeild -0.4%	0.10 0.10 0.40 0.43 0.47 0.76 P/CF 14.4x 30.1x 0.63 0.67 0.86 0.96 1.15 1.41 P/B 2.3x 4.5x 0.00 0.00 0.00 0.00 0.00 0.00 1.41 P/B 2.3x 4.5x 2019 2020 2021 2022E 2023E 2024E EV/EBITDA 19.6x 31.4x 2.9x 2.2x 0.8x 1.4x 2.2x 4.5x EV/EBIT 135.8x 2.055.7x 0.19x 0.14x 0.07x 0.11x 0.19x 0.35x - - 6.2% 29.5% 26.1% 29.6% 27.2% 32.0% Cash flow from ops, EUR m 6.2 6.0 3.8% 0.5% -3.0% 11.4% 19.6% 20.2% - - -24% -30.4% -17.5% 7.3% 11.1% 11.6% - - -1.8x 2.1x 1.7x 1.9.8<	0.10 0.10 0.10 0.43 0.47 0.76 P/CF 14.4x 30.1x 14.0x 0.63 0.67 0.86 0.96 1.15 1.41 P/B 2.3x 4.5x 1.7x 0.00 0.00 0.00 0.00 0.00 0.00 EV/EBITDA 19.6x 31.4x 18.4x 2019 2020 2021 2022E 2023E 2024E EV/EBITDA 19.6x 31.4x 18.4x 2.9x 2.2x 0.8x 1.4x 2.2x 4.5x EV/EBIT 135.8x 2.055.7x n.m. 0.19x 0.14x 0.07x 0.11x 0.19x 0.35x - - - 0.3x 0.5x 1.3x 2.1x 1.1x 0.7x 2.6x% EV, C2K m 4.063 7.009 4.690 2.4% 30.4% 17.5% 7.3% 11.1% 11.6% 20.5% EV, C2K m 4.063 7.009 4.690 2.4% 0.4%	0.10 0.10 0.43 0.47 0.76 P/CF 14.4x 30.1x 14.0x 5.9x 0.63 0.67 0.86 0.96 1.15 1.41 P/B 2.3x 4.5x 1.7x 2.6x 0.00 0.00 0.00 0.00 0.00 EV/EBITDA 19.6x 31.4x 18.4x 9.7x 2019 2020 2021 2022E 2024E EV/EBITDA 19.6x 31.4x 18.4x 9.7x 2.9x 2.2x 0.6x 1.4x 0.1x 0.19x 0.35x 1.3x 2.05% 4.8x 2.9x 0.3x 0.5x 1.3x 2.1x 1.1x 0.19x 0.35x 1.3x 2.1x 1.1x 1.1x 0.7x 26.2% 29.5% 26.1% 29.6% 27.2% 32.0% Cash flow from ops, EUR m 6.2 6.0 6.2 25.8 3.8% 0.5% -3.0% 17.4% 16.1% 20.5% EV, CZK m 4.063 7,009	0.10 0.10 0.43 0.47 0.76 P/CF 14.4x 30.1x 14.0x 5.9x 5.4x 0.63 0.67 0.86 0.96 1.15 1.41 P/B 2.3x 4.5x 1.7x 2.6x 2.2x 0.00 0.00 0.00 0.00 0.00 0.00 EV/EBITDA 19.6x 31.4x 18.4x 9.7x 9.3x 2019 2020 2021 2022E 2024E EV/EBITDA 19.6x 31.4x 18.4x 9.7x 9.3x 2.9x 2.2x 0.6x 1.4x 0.1x 0.19x 0.35x 1.3x 2.055.7x n.m. 16.6x 15.8x 0.19x 0.14x 0.07x 0.11x 0.19x 0.35x 1.3x 2.1x 1.7x 1.6% 2.5x 2.9x 2.5x 2.61% 29.6% 27.2% 32.0% Cash flow from ops, EUR m 6.2 6.0 6.2 25.8 28.8 3.8% 0.5% -3.0%

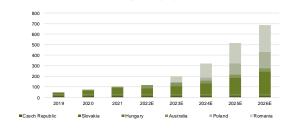
INCOME STATEMENT, EUR m	2019	2020	2021	2022E	2023E	2024E
Revenues	30.4	28.6	36.8	85.9	113.2	136.1
COGS & opex	-22.4	-20.2	-27.2	-60.4	-82.4	-92.5
EBIT	<u>1.1</u>	0.1	-1.1	15.0	18.2	27.9
Depreciation	6.8	8.3	10.7	10.5	12.7	15.7
EBITDA	7.9	8.4	9.6	25.4	30.8	43.5
Generation	11.6	12.9	17.2	26.6	32.8	42.0
O&M	-0.6	-0.1	0.2	0.6	1.0	1.5
Solutions	6.6	9.1	-2.5	0.9	1.9	6.2
Technology	0.0	0.5	1.5	4.9	5.1	4.4
Other	-0.3	-1.6	-6.1	-7.0	-8.9	-8.9
Financial income/(expense) & other	-4.4	-5.9	-6.5	-7.7	-9.3	-11.0
Profit before Tax	1.0	-6.5	-5.9	7.5	9.1	17.1
Income tax due/deferred	-1.7	-2.2	-0.5	-1.0	-0.6	-5.6
Profit/loss	<u>-0.7</u>	<u>-8.7</u>	<u>-6.4</u>	<u>6.3</u>	<u>12.5</u>	<u>15.8</u>
CASH FLOW, EUR m	2019	2020	2021	2022E	2023E	2024E
CF from Operations	6.2	6.0	6.2	25.8	28.8	46.6
Thereof depreciation	6.8	8.3	10.7	10.5	12.7	15.7
Thereof changes in w/c	0.7	-2.4	-5.0	-5.0	-2.8	-2.3
CF from Investments	-14.4	-20.2	-14.2	-24.3	-23.5	-65.3
Thereof CAPEX	-19.7	-18.3	-8.6	-14.3	-27.9	-69.8
CF from Financing	<u>11.7</u>	<u>12.1</u>	<u>30.6</u>	<u>9.8</u>	27.2	25.5
Dividends	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
OPERATIONS	2019	2020	2021	2022E	2023E	2024E

Generation capacity, MW	37	80	91	92	161	264
Growth (yoy)	46%	117%	13%	1%	75%	64%
Czech Rep	15	15	15	15	15	15
Slovakia	10	10	10	10	10	10
Hungary	12	40	51	52	71	86
Australia	0	15	15	15	15	15
Poland	0	0	0	0	0	28
Romania	0	0	0	0	50	110

Pow er production (GWh)

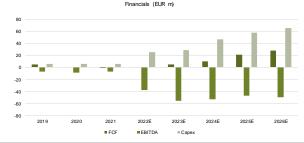
BALANCE SHEET, EUR m	2019	2020	2021	2022E	2023E	2024E
Current assets	28.4	23.9	<u>54.2</u>	73.5	60.3	120.8
Cash & Equivalents	12.4	9.9	32.5	43.8	26.1	82.9
Trade receivables	10.4	6.1	9.1	14.2	17.0	19.3
Inventories	1.2	1.0	2.2	5.2	6.8	8.2
Other	4.3	6.8	10.4	10.4	10.4	10.4
Non-current assets	108.7	135.1	142.5	146.3	161.5	215.7
Tangible	102.0	126.3	127.5	131.4	146.6	200.7
Intangible	0.9	1.3	0.8	0.8	0.8	0.8
Other	5.7	7.5	14.1	14.1	14.1	14.1
Total assets	<u>137.0</u>	<u>158.9</u>	<u>196.6</u>	219.8	221.8	336.5
Current liabilities	12.3	15.2	34.0	24.9	26.6	28.1
ST debt	3.7	6.0	28.5	16.4	16.4	16.4
Trade payables	7.4	7.2	4.5	7.5	9.3	10.7
Other	1.2	1.9	1.0	1.0	1.0	1.0
Non-current liabilities	86.8	103.6	<u>111.1</u>	137.1	124.9	222.3
LT debt	76.4	90.9	98.3	124.3	112.1	209.5
Other	10.4	12.7	12.8	12.8	12.8	12.8
Total liabilities	99.2	<u>118.8</u>	145.1	162.0	<u>151.5</u>	250.4
Minority interest	<u>-0.1</u>	-0.1	<u>-0.2</u>	-0.2	-0.2	-0.2
Shareholders' equity	37.8	40.1	<u>51.5</u>	57.8	70.3	86.1
Total liabilities and equity	<u>137.0</u>	<u>158.9</u>	<u>196.6</u>	<u>219.8</u>	221.8	336.5
Net Debt	67.3	84.5	89.1	<u>96.6</u>	133.1	169.6
Change in Net debt	<u>14</u>	<u>17</u>	<u>5</u>	<u>8</u>	<u>36</u>	36
MACRO ASSUMPTIONS	2019	2020	2021	2022E	2023E	2024E
Inflation, EU	1.2%	0.3%	1.5%	8.4%	3.3%	2.0%
German power price, EUR/MWh	49	46	89	280	175	135
Generation volume, GWh	44	70	103	122	200	324
Growth (yoy)	54%	60%	48%	18%	65%	62%

Generation by country forecast





FCF, EBITDA and capex forecasts

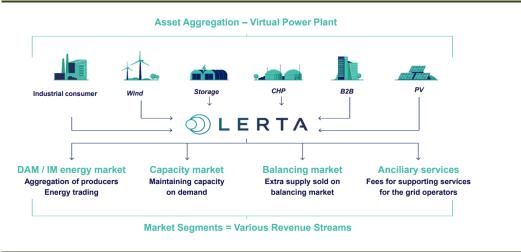


Lerta acquisition – strategically sound expansion

Last month (December 2022), Photon became the full owner of Lerta, acquiring a 43% stake from two founding shareholders, via cash and its own shares (EUR 0.5m and 3.6m shares, respectively). Photon has been a Lerta shareholder indirectly since 2018, and invested directly in the company in 2020, by buying a 12% stake. Earlier, in November last year, Photon increased its stake in the company to 57%, buying 32% of the shares from venture funds (PGE Ventures, ValueTech Seed Fund and Newberg), for EUR 6.9m.

Lerta's founders will now join Photon: Borys Tomala will become the Director of Photon Energy's newlyestablished New Energy Division, and Krzysztof Drożyński will continue in his role as the Head of Advanced Technologies. The full takeover is expected to close in 1Q23E and we already assume a new shareholder structure at Photon, a different number of shares and free float, and the consolidation of Lerta's numbers starting from this year.

Based in Poland, but active across the region, Lerta operates a virtual power plant (VPP), owns energy trading licenses in six countries, holds a third position in the Polish demand side response (DSR) market, with capacity contract secured for this year already. Photon expects Lerta to improve its own grid flexibility while offering the same service to third parties, with the renewables production on the rise, balancing through gas generation too expensive and grid investments reacting too slowly to the changing production mix.



Lerta: business model

Source: Company data

Through the acquisition, Photon increases its team by roughly 100 members, of which 30 are a salesforce, likely to boost also Photon's other-than-Lerta revenues, in our view.

For this year, Lerta has secured 134MW of DSR capacity in Poland, representing contracted revenues of EUR 7.7m, and the company is already preparing to enter the additional auction for 2024E, to be held in March 2023, with at least 300 MW of DSR capacity. Until 2030E, Lerta aims to grow its Polish DSR portfolio by a minimum of 100MW per year (500MW of DSR in 2026E). For 2027E, the company has already secured a 157MW contract (EUR 13.6m). In 2025E, the expansion of DSR participants is planned, with players from Germany, the Czech Republic, Slovakia, Lithuania and Sweden allowed to participate in providing DSR services to PSE. According to Photon, Lerta is making preparations for this expansion.

We are yet to receive more detailed information on the company's other revenues and our current estimates might be inaccurate. However, we estimate close to EUR 10m of new revenues for Photon and breakeven EBITDA is doable this year already, before further growth is boosted by new capacity contracts, Lerta addressing new customers and Photon's generation portfolio becoming more effective, thanks to Lerta's knowhow. In our model, Lerta's earnings contribution becomes a part of the Solutions segment.

Valuation: BUY, PT CZK 105, 56% upside

We value Photon at CZK 105/share, implying 56% upside. Our valuation is derived from our DCF and peer EV/EBITDA calculations, weighted 70% and 30%, respectively. As Photon does not plan to distribute dividends soon, we do not employ a DDM and, due to the relatively volatile net profit forecasts of Photon and its competitors, we also skip the P/E valuation for now.

As we believe Photon should also attract interest in Poland, Germany and other markets, we also show PLN and EUR PTs. Both, implied by the current 1Y forward FX rates, generate similar upside to our PT in CZK, as shown in the table below.

Valuation summary

	PT CZK/share	Upside
DCF	93	39%
Peers (EV/EBITDA)	131	95%
Weighted average (70:30)	105	56%
Implied PLN and EUR PTs		
12M PT PLN/sh	20.1	54%
12M PT EUR/sh	4.02	58%
Source: Bloomberg, WOOD Research		

DCF

Our DCF valuation yields upside of 39%, or a 12M PT of CZK 93/share. Our assumptions are:

- ✓ A WACC of 9.2% across our forecast period (up from 7.8% previously), produced from a debtadjusted beta of 1.2x (up from 1.3x previously), an ERP of 5.0% (without change), and a risk free rate of 6.0% (up from 4.5% previously), which yields a cost of equity of 12.0% (up from 10%, previously), and a cost of debt of 8.0% (up from 6.4%).
- ✓ Terminal growth of 2.5%.
- ✓ Our DCF period covers 2022-27E, by which time we believe the CEE capacity targets should be met, on our numbers. We note that the 300MW RayGen project is not included in our valuation (first 50MW planned for 2024E) and our CEE capacity addition estimates are more conservative than management's, due largely to the situation on the market, not the company itself.
- ✓ While we use our house power price estimates for the markets in which Photon operates, except for Australia, where we rely on the company's guidance and the local power market, we prefer to focus on the current growth story of the next six years, rather than longer-term forecasts, where the sensitivity of long-term power prices and cost inflation alter the valuation significantly, to both the upside and the downside. Also, Photon is yet to prove that the 2024E targets are not too ambitious and our one-to-two year lag is punishing the valuation already, in our view, with more upside potential.

EUR (000s)	2022E	2023E	2024E	2025E	2026E	2027E
EBIT	14,980	18,187	27,869	41,131	45,977	48,352
Depreciation	10,458	12,656	15,662	20,160	24,325	25,677
Capex	-3,503	-46,956	-68,801	-105,934	-96,483	-24,054
Working capital	-4,967	-2,763	-2,315	-3,119	-2,937	-2,937
Тах	-996	-637	-5,574	-8,226	-10,695	-11,170
FCF	15,971	-19,513	-33,159	-55,988	-39,813	35,868
Discount factor	1.00	0.92	0.84	0.77	0.71	0.65
Discounted FCF	16,017	-17,921	-27,888	-43,121	-28,080	23,166
Discounted cash flows	-77,826					
Terminal value	354,403		Risk	free		6.0%
Enterprise value	276,577		Beta			1.20
2021 net debt	89,104		ERP			5.0%
Minorities	150		Cost	of equity		12.0%
Equity value	187,323		Weig	ht of equity		30.0%
PT, CZK/sh	83		Weig	ht of Debt		70.0%
12M PT, CZK/sh	93		Cost	of debt, net tax		8.0%
Upside	39%		WAC	C		9.2%

Source: Company data, WOOD Research

DOF

Peer valuation

Our peer valuation approach remains unchanged. Photon is the first pure solar (and water treatment) company under our coverage. Looking at the CEE region, there are no well-covered solar companies with publicly available forecasts by the sell-side. Therefore, we have chosen a mix of western European and US companies, which have similar business models, sizes and growth profiles. However, the basket is not perfect, we admit. The peer 2022-24E EV/EBITDAs, on the Bloomberg consensus, produce a higher PT than our DCF, due most likely to the low liquidity of shares traded. Therefore, we have decided to place only a 30% weight on the peer valuation, as Photon's business model is specific and exposed to a different region. Regarding the other multiples, e.g., P/E and P/CF, we believe it is premature to use these, given the volatility of earnings at both Photon and its peers.

We note that we expect Photon's EBITDA margin to grow gradually, thanks mostly to the higher weight of power generation, but we also expect other segments' profitability to improve over our forecast period. However, being an integrated solar utility, with segments such as technology trading or engineering, it still produces lower margins than most of the peers below, which are more invested in high-margin power generation. Despite these lower margins vs. its peers, we believe that this is where the added value is at Photon – a business model that can grow in any solar downstream direction globally, while not overpaying for generation capacity expansion.

On our numbers, Photon is trading at 2022-24E EV/EBITDAs of 7.4-9.7x, at a 37% discount vs. the peer average. Despite the low liquidity, we believe these multiples are attractive. Our peer valuation yields 95% upside, or CZK 131/share.

EUR 000s	2022E	2023E	2024E
Peer multiple	16.1	13.2	12.5
EBITDA	25,437	30,843	43,531
Net debt	96,637	133,105	169,595
Equity value	311,980	274,480	375,540
Average	293,230		
CZK/sh	131		
Upside	95%		

Peer valuation: EV/EBITDA

Source: Bloomberg, WOOD Research

Valuation multiples of selected peers

Company		MCAP (EUR m)	AVTD 3M (EUR m)	EV/EBITDA	۱.	E	BITDA g	rowth	E	BITDA m	argin	
			(-)	2022E	2023E	2024E	2022E	2023E	2024E	2022E	2023E	2024E
ABO Wind	EUR	716	0.2	22.3	16.9	15.0	6%	30%	10%	18%	20%	20%
Azure Power Global	USD	234	1.6	6.8	6.2	n.a.	32%	9%	n.a.	81%	84%	n.a.
Encavis	EUR	3,020	0.1	15.2	14.3	13.7	25%	7%	4%	75%	75%	75%
Grenergy Renovables	EUR	902	1.6	20.2	15.5	13.0	49%	81%	50%	33%	40%	47%
Neoen	EUR	4,168	4.8	18.2	15.8	14.9	31%	23%	19%	82%	84%	83%
Scatec	NOK	1,276	2.9	12.8	11.5	10.2	-11%	29%	32%	61%	60%	66%
Solaria Energia	EUR	2,445	9.3	21.8	17.0	14.4	59%	41%	28%	88%	87%	87%
Voltalia	EUR	2,355	1.1	19.3	13.5	12.3	36%	50%	14%	41%	51%	53%
7C SolarParken	EUR	361	0.3	8.1	8.2	6.8	41%	-2%	-12%	86%	84%	79%
Average		1,720	2.4	16.1	13.2	12.5	30%	30%	18%	63%	65%	64%
Photon		168	0.1	9.7	9.3	7.4	165%	21%	41%	30%	27%	32%
Discount peers, delta				-39%	-30%	-41%	136%	-8%	23%	-33%	-38%	-32%

Source: Bloomberg, WOOD Research

We are now more bullish vs. our July update on 2022E, which is in line with both the company's revised guidance and the operating report released this week. In 2023-24E, our sales estimates are higher, due mainly to stronger expectations in the Technology segment, but also driven by Lerta's revenues. These more than offset our now slower pipeline rollout, but are not strong enough to compensate for the lower EBITDA expectations, after we reduce the much more profitable generation outlook.

Model update

EUR m	F	Revenues			EBITDA			Net profit	
	2022E	2023E	2024E	2022E	2023E	2024E	2022E	2023E	2024E
New	85.9	113.2	136.1	25.4	30.8	43.5	6.3	12.5	15.8
Old	64.1	81.6	102.8	20.3	32.3	49.5	3.3	11.1	17.3
% Difference	34.0%	38.7%	32.4%	25.3%	-4.5%	-12.1%	89.5%	13.0%	-8.7%

Source: WOOD Research

Risks

Power prices. Our model is based on Photon selling a large portion of its generated power through merchant pricing, opting out of the regulatory schemes where it can, until the market power price drops below the regulated one, after which the plants would return to regulated earnings, if not before. We believe that our future power price estimates are conservative enough, but we stress that there is both upside and downside to our estimates, depending on the future developments on both the European and Australian power markets. With most of the EBITDA coming from Electricity Generation (90%, after adjusting for Other EBITDA, which includes the company-level costs), the risks are clearly skewed towards the generation segment, rather than the stable, service-like earnings of the other segments. Over time, when power prices fall and the other segments grow with the market, including the water treatment business, the power price risk will fall.

Regulatory risks. As with any other utility, the majority of Photon's EBITDA comes from power generation, which is facing an increasing risk of government intervention in all of the countries in which it operates, given the ongoing elevated power prices. From last year already, Photon has been already running most of its PV capacity at merchant pricing and we have already seen changes in the renumeration schemes in the Czech Republic and Slovakia recently. Having said that, any form of price caps, additional changes in renumeration schemes or other measures could result in downside for our current estimates and valuation.

Execution risk. The company plans to reach 600MW of generation capacity by 2024E, which would mean that its production capacity would grow almost sevenfold vs. its current capacity. The current pipeline looks busy and the targets are achievable, in our view. However, either due to delays on the company's end or caused by third parties, this target may not be reached, which we reflect in our model.

Supply chain issues/inflating costs. While the LCOE of the PVs has dropped around 90% over the past two decades and the recent price spike stands at roughly 20% for a MW of PV capacity, the supply chain disruptions and the unprecedented demand for new solar capacity, coupled with inflation, could increase the company's capex/MW further, or delay the pipeline, due to missing parts.

Disclosure and modelling. For a small cap, considering our coverage universe, Photon has detailed disclosure, we see the company and its majority shareholders as transparent, and Photon is doing, in our view, what it can do reach out to the market, through a well-prepared IR team and improving segmental disclosure. That said, we still find it quite difficult to model the Engineering and Technology arms of the business and their future value add for the Electricity Generation profitability, as well as their own long-term revenue growth and margins. Moreover, we prefer pencilling in conservative load factors in Romania, where Photon just built 32MW of new capacity, and believe our Lerta estimates are also cautious. Separately, the water business and its potential upside are not fully reflected in our numbers, nor the giant 300MW RayGen project and the rights to it. Therefore, we may adjust our numbers in future, in line with the upcoming developments, observing the market trends, the company's performance and more detailed guidance on each of the projects mentioned above. We believe we are conservative in our assumptions, and we see the risks as more skewed to the upside, rather than the downside.

Main shareholders. Mr. Hotar and Mr. Gartner own around 70% of the company's shares. We are not aware of them planning to dispose of their stakes, and we are pleased with the corporate governance at Photon, but we note that the business is highly dependent on their leadership, from the CEE capacity growth to new developments in Australia.

Competition. Photon operates in a very competitive space. It is a well-established player in each of the solar segments, and competes with both large, international players on larger-scale projects, as well as many more smaller players, focusing on smaller projects. Similarly, in the Engineering, Technology and O&M segments, the market is extremely competitive, and the company has yet to show the market that it can succeed in new markets, such as Poland and Romania.

Liquidity of shares. Photon is traded in Prague, Warsaw and Germany. Being a small cap, the combined 3M daily liquidity stands at only EUR 0.1m.

Financials

Income statement

EUR m	2019	2020	2021	2022E	2023E	2024E
Revenues	30.4	28.6	36.8	85.9	113.2	136.1
Raw materials and consumables used	-9.8	-4.6	-12.7	-14.6	-18.6	-31.0
Solar levy	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9
personnel expenses	-4.6	-5.8	-6.7	-7.3	-7.5	-7.7
Other expenses	-7.1	-8.9	-6.8	-37.6	-55.3	-53.0
EBITDA	7.9	8.4	9.6	25.4	30.8	43.5
Depreciation	-6.8	-8.3	-10.7	-10.5	-12.7	-15.7
Impairments	-0.1	-0.4	-0.2	0.0	0.0	0.0
Gain (loss) on disposal of investments	4.3	0.0	0.5	0.0	0.0	0.0
Share of profit equity-accounted investments	0.0	0.1	0.1	0.0	0.0	0.0
EBIT	5.4	-0.1	-0.7	15.0	18.2	27.9
Financial income	0.2	0.1	0.2	0.2	0.2	0.2
Financial expenses	-4.7	-6.0	-6.8	-7.7	-9.3	-11.0
Profit before Tax	1.0	-6.5	-5.9	7.5	9.1	17.1
Result from discontinued operations				0.0	4.3	4.5
Income tax due/deferred	-1.7	-2.2	-0.5	-1.0	-0.6	-5.6
Profit/loss	-0.7	-8.7	-6.4	6.3	12.5	15.8

Balance sheet

EUR m	2019	2020	2021	2022E	2023E	2024E
Current assets	28.4	23.9	54.2	73.5	60.3	120.8
Cash & Equivalents	12.4	9.9	32.5	43.8	26.1	82.9
Trade receivables	10.4	6.1	9.1	14.2	17.0	19.3
Inventories	1.2	1.0	2.2	5.2	6.8	8.2
Other	4.3	6.8	10.4	10.4	10.4	10.4
Non-current assets	108.7	135.1	142.5	146.3	161.5	215.7
Tangible	102.0	126.3	127.5	131.4	146.6	200.7
Intangible	0.9	1.3	0.8	0.8	0.8	0.8
Other	5.7	7.5	14.1	14.1	14.1	14.1
Total assets	137.0	158.9	196.6	219.8	221.8	336.5
Current liabilities	12.3	15.2	34.0	24.9	26.6	28.1
ST debt	3.7	6.0	28.5	16.4	16.4	16.4
Trade payables	7.4	7.2	4.5	7.5	9.3	10.7
Other	1.2	1.9	1.0	1.0	1.0	1.0
Non-current liabilities	86.8	103.6	111.1	137.1	124.9	222.3
LT debt	76.4	90.9	98.3	124.3	112.1	209.5
Other	10.4	12.7	12.8	12.8	12.8	12.8
Total liabilities	99.2	118.8	145.1	162.0	151.5	250.4
Minority interest	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2
Shareholders' equity	37.8	40.1	51.5	57.8	70.3	86.1
Total liabilities and equity	137.0	158.9	196.6	219.8	221.8	336.5

Source: Company data, WOOD Research

Cash flow statement

EUR m	2019	2020	2021	2022E	2023E	2024E
Profit before income tax	1.0	-6.5	-5.9	7.5	9.1	17.1
Depreciation and amortisation	6.8	8.3	10.7	10.5	12.7	15.7
Finance costs	4.4	6.4	5.2	7.5	9.1	10.8
Other	-4.5	0.5	3.7	4.3	0.0	-0.2
Operating cash flows before WC changes	7.7	8.6	13.7	29.8	30.9	43.3
WC changes	0.7	-2.4	-5.0	-5.0	-2.8	-2.3
Income tax paid	-0.3	0.8	-2.3	1.0	0.6	5.6
Other	-1.9	-1.0	-0.1	0.0	0.0	0.0
Net cash from operating activities	6.2	6.0	6.2	25.8	28.8	46.6
Capex	-19.7	-18.3	-8.6	-14.3	-27.9	-69.8
Other	5.3	-1.9	-5.6	-10.0	4.3	4.5
Net cash used in investing activities	-14.4	-20.2	-14.2	-24.3	-23.5	-65.3
Net proceeds from borrowings	15.4	18.6	29.8	17.5	36.5	36.5
Other	-3.7	-6.7	-6.9	-7.7	-9.3	-11.0
Capital increase	0.0	0.2	7.8	0.0	0.0	0.0
Net cash used in financing activities	11.7	12.1	30.6	9.8	27.2	25.5

Source: Company data, WOOD Research

Important disclosures

This publication is issued by WOOD & Company Financial Services, a.s. ("WOOD&Co") and/or one of its branches who are authorised and regulated by the Czech National Bank (CNB) as Home State regulator and in Poland by the Polish Financial Supervision Authority (KNF), in Slovakia by the National Bank of Slovakia (NBS), in Italy by the Companies and Stock Exchange Commission (CONSOB), in Ireland by Central Bank of Ireland (CBI), in Romania by National Bank of Romania (NBR) and in the UK by the Financial Conduct Authority (FCA) as Host State regulators.

This investment research was prepared by WOOD&Co with financial assistance from Taipei China through the TaiwanBusiness EBRD Technical Cooperation Fund managed by the European Bank for Reconstruction and Development ("EBRD"). Neither EBRD nor Taipei China has had any editorial rights or other influence on the content of this investment research. Neither EBRD nor Taipei China makes any representation or warranty or assumes any responsibility or liability in relation to the contents of this investment research or reliance thereon. The views expressed in this investment research are those of WOOD&Co and can in no way be taken to reflect the official opinion of EBRD or of Taipei China. EBRD may, as of the date hereof or in the future, have an investment in, provide other advice or services to, or otherwise have a financial interest in, certain of the companies and parties contained or named in this investment research or in their affiliates.

This investment research was completed on 15/01/2023 at 14:15 CET and disseminated on 16/01/2023 at 07:45 CET.

WOOD&Co's rating and price target history for Photon Energy in the preceding 12-month period:						
Date	Rating	Date	PT			
25/05/2022	BUY – initation of coverage	25/05/2022	CZK 84			
		21/072022	CZK 90.0			
		16/01/2023	C7K 105			

The history of all WOOD&Co's investment research disseminated during the preceeding 12-month period can be accessed via our website at https://research.wood.com.

The meanings of recommendations made in WOOD&Co's investment research are as follows:

BUY: The stock is expected to generate total returns of over 15% during the next 12 months as measured by the price target.

HOLD: The stock is expected to generate total returns of 0-15% during the next 12 months as measured by the price target.

SELL: The stock is expected to generate a negative total return during the next 12 months as measured by the price target.

RESTRICTED: Financial forecasts, and/or a rating and/or a price target is restricted from disclosure owing to Compliance or other regulatory/legal considerations such as a blackout period or a conflict of interest.

NOT RATED: Suspension of rating after 30 consecutive weekdays where the current price vis-à-vis the price target has been out of the range dictated by the current BUY/HOLD/SELL rating.

COVERAGE IN TRANSITION: Due to changes in the Research team, the disclosure of a stock's rating and/or price target and/or financial information are temporarily suspended.

As of the end of the last calendar quarter, the proportion of all WOOD&Co's investment research vis-à-vis the proportion of subject companies that were investment banking clients over the previous 12 months is as follows:

	BUY	HOLD	SELL	Restricted	NOT RATED	Coverage in transition
Equity Research Coverage	61%	32%	6%	1%	n.a.	n.a.
IB Clients	1%	1%	n.a.	n.a.	n.a.	n.a.

Any prices of financial instruments quoted in this investment research are taken as of the previous day's market close on the home market unless otherwise stated.

Details of the methodologies used to determine WOOD&Co's price targets and risk assessment related to the achievement of the targets are outlined throughout the most recent substantive report/note on the subject company.

It should be assumed that the risks and valuation methodology presented in daily news or flash notes, and not changing WOOD&Co's estimates or ratings, are as set out in the most recent substantive research report/note on the subject company and can be found on our website at https://research.wood.com.

WOOD&Co's policy is to update investment research as it deems appropriate, based on developments in the subject company, sector or market that may have a material impact on the views or opinions stated in the investment research.

WOOD Research Disclosures (as of 16 January 2023)

	-
Company	Disclosures
Alior Bank	5
AmRest	5
Astarta Holding	4
Banca Transilvania	5
Bank of Cyprus	4
BRD	5
Bucharest Stock Exchange	5
CCC	5
CD Projekt	5
Colt CZ Group	3, 5
CEZ	5
Dino	5
DO&CO	5
Electrica	5
Erste Group Bank	5
Eurobank	4
Eurocash	5
Fondul Proprietatea	4,5
Kazatomprom	5
Kernel	5
KGHM	5
Kofola CS	5
Komercni	4,5
Kruk	5
Lotos	5
MedLife	4
MONETA Money Bank	5
NLB Group	5
Nuclearelectrica	5
O2 Czech Republic	4,5
OMV Petrom	5
Orange PL	5
Pekao	4, 5
PGE	5
PGNiG	5
Philip Morris CR	5
PKN Orlen	5
PKO BP	4,5
PZU	4.5
Romgaz	5
Santander Bank Polska	5
	. ~

Siauliu Bankas	5
STS	1, 2, 3
TBC Bank	3
Transelectrica	5
Transgaz	5
# Description	

- The company currently is, or in the past 12 months was, a client of WOOD&Co or any of its affiliates for the provision of corporate finance/investment banking services. 1
- 2 In the past 12 months, WOOD&Co or any of its affiliates have received compensation for corporate finance/investment banking services from the company.
- In the past 12 months, WOOD&Co or any of its affiliates have been lead manager or co-lead manager of a publicly disclosed offer of the company's financial instruments. 3
- In the past 12 months, WOOD&Co or any of its affilates have acted as broker to the company
- WOOD&Co or any of its affiliates are market maker(s) or liquidity provider(s) in relation to financial instruments of the company. 5
- In the past 12 months, WOOD&Co or any of its affiliates have provided to the company any services set out in Sections A and B or Annex I to the Directive 2014/65/EU of the 6 European Parliament and of the Council, other than services listed under points 1, 3, 4 or 5 above, or received compensation for such services from the company.
- 7 The authoring analyst or any individual involved in the preparation of this investment research have purchased/received shares in the company prior to a public offering of those shares; and the price at which they were acquired along with the date of acquisition are disclosed above.
- The authoring analyst or any individual involved in the preparation of this investment research has a direct ownership position in securities issued by the company. 8 A partner, director, officer, employee or agent of WOOD&Co and its affiliates, or a member of his/her household, is an officer, or director, or serves as an advisor or board member 9 of the company.
- 10 WOOD&Co or its affiliates hold a net long or short position exceeding the threshold of 0,5% of the total issued share capital of the company, calculated in accordance with Artcle3 of Regulation (EU) No 236/2012 and with Chapters III and IV of Commission Delegated Regulation (EU) No 918/2012.
- The company owns more than 5% of the total issued share capital in WOOD&Co or any of its affiliates. 11

The authoring analysts who are responsible for the preparation of this investment research have received (or will receive) compensation based upon (among other factors) the overall profits of WOOD&Co, which includes corporate finance/investment banking, sales and trading and principal trading revenues. However, such authoring analysts have not received, and will not receive, compensation that is directly based upon or linked to one or more specific activities, or to recommendations contained in the investment research. One factor in equity research analyst compensation is arranging corporate access events/meetings between institutional clients and the management teams of covered companies (with the company management being more likely to participate when the analyst has a positive view of the company).

WOOD&Co and its affiliates may have a corporate finance/investment banking or other relationship with the company that is the subject of this investment research and may trade in any of the designated investments mentioned herein either for their own account or the accounts of their clients, in good faith or in the normal course of market making. Accordingly, WOOD&Co or their affiliates, principals or employees (other than the authoring analyst(s) who prepared this investment research) may at any time have a long or short position in any such designated investments, related designated investments or in options, futures or other derivative instruments based thereon.

WOOD&Co manages conflicts of interest arising as a result of preparation and publication of research through its use of internal databases, notifications by the relevant employees and Chinese Walls as monitored by Compliance. For further details, please see our website at https://www.wood.cz/mifid-information/.

The information contained in this investment research has been compiled by WOOD&Co from sources believed to be reliable, but (with the exception of the information about WOOD&Co) no representation or warranty, express or implied, is made by WOOD&Co, its affiliates or any other person as to its fairness, accuracy, completeness or correctness. WOOD&Co has not independently verified the facts, assumptions, and estimates contained herein. All estimates, opinions and other information contained in this investment research constitute WOOD&Co' judgement as of the date of this investment research, are subject to change without notice and are provided in good faith but without legal responsibility or liability.

WOOD&Co salespeople, traders, and other professionals may provide oral or written market commentary or trading strategies to our clients and our proprietary trading desk that reflect opinions that are contrary to the opinions expressed in this investment research. WOOD&Co's affiliates, proprietary trading desk and investing businesses may make investment decisions that are inconsistent with the recommendations or views expressed in this investment research.

This investment research is provided for information purposes only and does not constitute or form part of an offer or invitation or solicitation to engage in investment activity or to buy or sell any designated investments discussed herein in any jurisdiction. As a result, the designated investments discussed in this investment research may not be eligible for offer or sale in some jurisdictions. This investment research is not, and under no circumstances should be construed as, a solicitation to act as a securities broker or dealer in any jurisdiction by any person or company that is not legally permitted to carry on the business of a securities broker or dealer in that jurisdiction.

This investment research does not have regard to the investment objectives, financial situation or particular needs of any particular person. Investors should consider this report as only a single factor in making their investment decision and obtain advice based on their own individual circumstances before making an investment decision. To the fullest extent permitted by law, none of WOOD&Co, its affiliates or any other person accepts any liability whatsoever for any direct or consequential loss arising from or in connection with the use of this investment research.

For United Kingdom or EU Residents:

This investment research is for persons who are eligible counterparties or professional clients within the meaning of Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU and is exempt from the general restrictions in section 21 of the Financial Services and Markets Act 2000 (or any analogous legislation) on the communication of invitations or inducements to engage in investment activity on the grounds that it is being distributed in the United Kingdom only to persons of a kind described in Article 19(5) (Investment Professionals) and 49(2) (High Net Worth companies, unincorporated associations etc) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended).

For United States Residents:

This investment research distributed in the United States by WOOD&Co, and in certain instances by Brasil Plural Securities LLC ("Brasil Plural"), a U.S. registered broker dealer, only to "major U.S. institutional investors", as defined under Rule 15a-6 promulgated under the U.S. Securities Exchange Act of 1934, as amended, and as interpreted by the staff of the U.S. Securities and Exchange Commission ("SEC"). This investment research is not intended for use by any person or entity that is not a major U.S. institutional investor. If you have received a copy of this research and are not a major U.S. institutional investor, you are instructed not to read, rely on or reproduce the contents hereof, and to destroy this research or return it to WOOD&Co or to Brasil Plural. Analyst(s) preparing this report are employees of WOOD&Co who are resident outside the United States and are not associated persons or employees of any U.S. registered broker-dealer. Therefore the analyst(s) are not be subject to Rule 2711 of the Financial Industry Regulatory Authority ("FINRA") or to Regulation AC adopted by SEC which, among other things, restrict communications with a subject company, public appearances and personal trading in securities by a research analyst. Any major U.S. Institutional investor wishing to effect transactions in any securities referred to herein or options thereon should do so by contacting a representative of Brasil Plural. Brasil Plural is a broker-dealer registered with the SEC and a member of FINRA and the Securities Investor Protection Corporation. Its address is 545 Madison Avenue. 8th Floor, New York, NY 10022 and its telephone number is 212-388-5613. WOOD&Co is not affiliated with Brasil Plural or any other U.S. registered broker-dealer.

The views and sentiments expressed in this investment research and any findings thereof accurately reflect the analyst's truthful views about the subject securities and or issuers discussed herein.



CONTACTS

Czech Republic

namesti Republiky 1079/1a Palladium 110 00 Praha 1 Czech Republic Tel +420 222 096 111 Fax +420 222 096 222

Romania

Lamda Building 7A Bucuresti-Ploiesti Street 4th Floor 013682 Bucharest 1 Tel.: +40 316 30 11 81

Research

Co-Head of Research/ Head of Research Poland

Marta Jezewska-Wasilewska +48 22 222 1548 marta.iezewska-wasile wska@wood.com

Head of Turkey Research Atinc Ozkan +90 542 202 3632 atinc.ozkan@wood.com

Head of Financials Can Demir +44 20 3530 0623 can.demir@wood.com

Consumer/Real Estate Jakub Caithaml +420 222 096 481 jakub.caithaml @wood.com

Turkey Can Yurtcan +420 222 096 780 can.yurtcan@wood.com

Financials Miguel Dias +420 735 729 418 miguel.dias@wood.com

Sales

Head of Sales Kristen Andrasko +420 222 096 253 kristen.andrasko@wood.cz

Grzegorz Skowronski +48 22 222 1559 grzegorz.skowronski@wood.com

Centrum Marszalkowska Marszalkowska 126/134 7th Floor 00 008 Warszawa Poland Tel +48 22 222 1530 Fax +48 22 222 1531

Poland

UК

16 Berkeley Street London W1.J 8DZ Tel +44 20 3530 0691 Italy Via Luigi Settembrini, 35 20124 Milan Italy

Tel +39 02 36692 500

Kristen Andrasko Head of Equities +420 222 096 253 kristen andrasko@wood.com

Bloomberg page WUCO

www.wood.com

Macroeconomics

Macroeconomics

Alessio Chiesa

Bram Buring

+44 75177 06102

alessio.chiesa@wood.com

Utilities/Mining/Pharma

+420 222 096 250

Gaming/Mid-caps

Maria Mickiewicz

+48 602 450 718

+420 739 627 170

aidar.ulan@wood.cz

CEE

Aidar Ulan

maria.mickiewicz@wood.com

bram.buring@wood.com

Raffaella Tenconi

+44 20 3530 0685

raffaella.tenconi@wood.com

Co-Head of Research/Head of Greek Research Alex Boulougouris

+30 216 200 5261 alex.boulougouris@wood.com

Head of Russia Research Ildar Davletshin +44 203 530 0631 ildar.davletshin@wood.com

Head of TMT Piotr Raciborski +48 22 222 1551 piotr.raciborski@wood.com

Energy/Utilities Ondrej Slama +420 222 096 484 ondrej.slama@wood.com

Greece Fani Tzioukalia +30 216 200 5260 fani.tzioukalia@wood.com

Real Estate Peter Palovic +420 222 096 486 peter.palovic@wood.cz Head of Consumer/Industrials Lukasz Wachelko +48 22 222 1560 lukasz.wachelko@wood.com

Head of Romania Research Iuliana Ciopraga +40 316 30 1185 iuliana.ciopraga@wood.com

Energy Jonathan Lamb

+44 20 3530 0621

ionathan.lamb@wood.com Metals/Mining Artem Bagdasaryan +420 222 096 710 artem.bagdasaryan@wood.com

Russia Dmitry Vlasov +44 750 714 6702 dmitry.vlasov@wood.com

Piotr Kopec +48 22 222 1615 piotr.kopec@wood.com

Tatiana Sarandinaki Brasil Plural in association with WOOD&Co. 1 212 388 5613

Ioana Pop +44 20 3530 0693 ioana.pop@wood.com

tsarandinaki@wood-brasilplural.com

Vladimir Vavra +420 222 096 397 vladimir.vavra@wood.com

Company/Sector Date Title Analyst 13/01/23 Georgian Banks Can Demir, Alex Boulougouris Still good value, despite the taxman 12/01/23 Raiffeisen Bank International Potential event-driven BUY Marta Jezewska-Wasilewska, Miguel Dias 11/01/23 Greece Investment grade in the making Alex Boulougouris, Fani Tzioukalia 09/01/23 NLB Group Too appealing to ignore Alex Boulougouris, Marta Jezewska-Wasilewska 06/01/23 European Oil and Gas December 2022 Jonathan Lamb, Ondrej Slama 04/01/23 Rear-View Mirror - EME markets 2022 ends with Turkey still on top Research Team Can Demir, Alex Boulougouris 22/12/22 Kaspi.kz Possible trinity 21/12/22 Pepco Group Lukasz Wachelko, Fani Tzioukalia Time for discounters 20/12/22 Bittnet Systems Continuing M&A spree Piotr Raciborski, Iuliana Ciopraga 19/12/22 Jumbo Christmas has come early this year Fani Tzioukalia, Lukasz Wachelko 16/12/22 MOL An invisible hand, once more Jonathan Lamb, Ondrej Slama 15/12/22 Icelandic Banks The outliers Can Demir, Miguel Dias, Aidar Ulan 15/12/22 OTP Bank Marta Jezewska-Wasilewska, Miguel Dias Should fare well, absent more negative events

Although the information contained in this report comes from sources WOOD & Company believes to be reliable, we do not guarantee its accuracy, and such information may be incomplete or condensed. All opinions and estimates included in this report constitute our judgment as of this date and are subject to change without notice. This report is for information purposes only and is not intended as an offer or solicitation with respect to the purchase or sale of any security.

Sales Trading and Execution Services

Zuzana Mora +420 222 096 283 zuzana mora@wood.com

RECENTLY PUBLISHED REPORTS

Jarek Tomczynski +44 203 530 0688 iarek.tomczvnski@wood.com

Jan Koch

+48 22 222 1616

ian.koch@wood.com

Ermir Shkurti

+420 222 096 847

ermir.shkurti@wood.com